

TRUE RANDOM NUMBER GENERATOR AND
METHOD OF GENERATING TRUE RANDOM NUMBERS

ABSTRACT:

A true random number generator may comprise a multi-gigabit transceiver with a transceiver to receive a signal of predetermined source data. Recovery circuitry of the transceiver may be operable to recover data from the received signal. A controller may stress the recovery circuit to cause a portion of the data recovered to differ from the respective portion of the predetermined source data. An extractor may define numbers for a true random number sequence based on differences between the recovered data and the predetermined serial source data over an interval of time. In a particular example, the controller may influence at least one of the serial data transfer rate, the number of sequential same-state bits for the predetermined source data, and the stability of a clock signal to be recovered by a portion of the recovery circuit.